FROM RESEARCH TO PRACTICE

Making Use of Qualitative Research Techniques

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Consider the following situation: You have recently taken on administrative responsibilities at a new hospital where you are responsible for improving patient care programs and organizational efficiency in the general medicine outpatient clinics. You are familiar with your department's general objectives for change and with theoretical strategies for improving operations, but you want to optimize the transitions for all involved parties. In early meetings, department and hospital staff express skepticism that any of the anticipated changes would serve them or the hospital's patients better.

In this situation, immediate action—such as announcing a new clinical or quality review program—would directly address the challenges you face. But more information might help you more effectively meet your professional responsibilities. You might want to learn what systems already work well in the clinics, or better understand what services would be valued in the local community. You might also want to learn about employees' perceptions of their mission and service to identify strategies that could motivate them for change. The information to help you meet these objectives will come primarily from the people involved in your questions and plans—your patients and coworkers, for example. One can gather this information by talking to people informally. Alternatively, one can use qualitative research techniques for this purpose, particularly in new situations and environments. This article addresses how and why busy clinicians might use qualitative techniques to answer questions and solve problems like those in the scenario above.

Qualitative research is a form of inquiry that analyzes information conveyed through language and behavior in natural settings.[1] It is used to capture expressive information not conveyed in quantitative data about beliefs, values, feelings, and motivations that underlie behaviors. Qualitative methods derive from a variety of disciplines and traditions.[2] They are used to learn directly from patients and others what is important to them, to provide the context necessary to understand quantitative findings, and to identify variables important for future clinical studies. Although qualitative inquiry has been championed as a way of "reaching the parts other methods cannot reach,"[3] it is also distrusted by some because it rarely provides a generalizable foundation for clinical decisions and policies.[4] Readers are referred to several recent editorials for overviews of these differences and proposals for their reconciliation.[3–7]

Some qualitative approaches use technical methods (such as statistical content analysis) to determine the significance of findings, while others rely on researchers thoughtful reflection. Ethnography is a form of inquiry that can combine these approaches, and we will use techniques from this tradition to illustrate our points.

Ethnography is a semistructured way of learning about people and their culture.[8] With specific questions in mind, ethnographic researchers immerse themselves in an environment to discover the meanings, conventions of behavior, and ways of thinking important to individuals of a group as they emerge in unrehearsed encounters. Table 1 outlines some of the techniques investigators use in this process.

Ethnographers' essential task is to observe study subjects in their natural settings. They can do so as silent background observers or as "participant-observers" who ask questions as they accompany study subjects in their activities. In either role they collect data in both unstructured and structured ways. They can write spontaneous "field" notes that detail what they see and hear, or organize their observations around categories, checklists, or rating scales that they bring to the setting. Beyond observing, ethnographers interview subjects with one or more objectives in mind: to learn from well-positioned individuals who can provide useful information (also called "key informant" interviews); to understand experiences especially important to shaping perceptions and decisions

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Table 1. Examples of Qualitative Techniques

Observation of people and settings as a background observer or a participant-observer
Using unstructured data collection
Descriptive "field" notes
Using structured data collection
Categorizing phenomena
Using checklists
Using rating scales
Interviews of participants central to the relevant group or process
Key informant interviews
Critical incident reports
Focus groups
Recording and analysis of key interactions (audiotape or videotape)
Attention to data reliability
Detailed documentation of analysis
Parallel review by independent investigators
Attention to data validity
Triangulation: collection from independent sources using differing means
Feedback from study subjects
Thorough examination of outlying cases

Table 2. Professional Challenges for Which Qualitative Approaches Could Be Useful

Clinical
Improving patient adherence to clinical recommendations
Facilitating advance directives, communicating bad news, dealing with other challenges to clinical communication
Educational
Determining what influences career choices of graduate and postgraduate trainees
Understanding why a student course is evaluated unfavorably
Administrative
Assessing local needs and operations when implementing new programs or when engaged in job searches
Managing disagreements with coworkers; advancing negotiations with partners or administrators
Improving professional relationships in an academic unit divided into hardworking clinician-teachers and overcommitted investigators
Other
Clarifying performance expectations for patients, clinicians, and students in a bottom-line-oriented health maintenance organization
Discovering what influences the behaviors of patients and health workers for quality improvement

("critical incident" reports); or to generate new information from groups of subjects in focus groups. Audiotaping or videotaping these interactions helps guarantee that expressive data are captured accurately and completely as they emerge. Taping also permits the researcher to carry the data to more controlled settings, where they can be transcribed, coded, analyzed for important themes and meanings, and verified using trained evaluators (aided by computer software if appropriate).[2]

The use of more than one evaluator helps ensure the reliability of ethnographic data, as does a detailed accounting of how a study analysis is performed. Researchers can be reasonably assured of the validity of their findings by collecting data from independent sources, presenting preliminary findings to study participants for their feedback, and fully examining unusual or "outlying" information. These strategies are likely to become increasingly standardized as consensus emerges around the need for greater methodologic rigor in qualitative research.[9,10]

These methods are appropriate for practical situations in which a fuller understanding of behavior, the meanings and contexts of events, and the influence of values on choices might be useful for physicians (Table 2). We describe below how ethnographic techniques might be used to gather information necessary to plan and implement administrative changes in a clinical setting.

USING QUALITATIVE TECHNIQUES FOR ADMINISTRATIVE CHANGE

Suppose that as one of your first initiatives you would like to improve the process that patients in the medicine clinics go through to see their providers. Specifically, you would like to minimize unnecessary administrative delays and improve patients' perceptions of waiting times. Reviewing registration sheets will give you valuable quantitative information about the timing of the process, but direct, semistructured observation of the clinic's operations could reveal other information about areas for attention. For example, you might observe the registration and waiting area with the following questions in mind: Is the clerical staff sufficient to register patients and perform other administrative work during the clinic's busiest hours? Are anticipated delays explained sympathetically to patients at the time they arrive? Are there sufficient diversions for patients in the waiting room? Is there evidence of impatience among the patients in the waiting area, and under what circumstances? Your observations may not answer all of these questions, but they can provide a working sense of which to investigate further, what other questions to ask, and a preliminary sense of the character of the administrative process as clinic patients experience it. More generally, they can reveal salient differences between abstract descriptions of what happens for patients and the way things really work in a specific setting.

Any such observation process will inevitably leave several impressions relevant to the setting or process one is exploring. You might discover that nursing staff are frequently distracted by clerical duties, for example, or that the variety and quality of patient-oriented material in the waiting area should be broader given the clinic population. These impressions need to be confirmed or revised through feedback from others before you can consider them valid. Realistically, you will also need help in devel-

oping practical solutions to the problems you identify. Colleagues and department leaders can provide this input, but a key informant among hospital staff is often more useful for this purpose. Asking the question "Who in the hospital knows the most about...?" can lead you to such an individual, who may have no formal title or authority but can provide insider's knowledge about the hospital and its environment. For instance, this person could cue you into the relative place of the general medicine clinics within the hospital's most important and efficient operations, as well as its priorities, missions, and long-standing values and traditions. Key informants are typically invaluable in practical matters, identifying those who know the most about making and approving budgets, hiring personnel, finding space, purchasing equipment, and setting and maintaining standards. And they often help distinguish among key organizational actors, such as those with formal authority, those with actual power, and those who get particular kinds of work done most effectively.

Suppose you look for and find such an informant in a clinic nurse, who has worked in the hospital for 18 years and in the outpatient clinics for the past 10 years. In an extensive interview she confirms your impressions about areas for improvement and points out other ways to improve efficiency, such as converting a procedure area to a multipurpose examining room and arranging for laboratory runs to and from the clinic. She gives you names of hospital staff who are approachable and can influence the allocation of space and other resources, but politely shares her doubts that effective change is possible based on her experience with efforts similar to yours which have failed in the past.

Knowing this, it would be useful to investigate whether other staff have had similar experiences in the hospital. Individuals who witnessed past changes in policy and procedure may be able to provide critical incident reports of successes and failures that have defined the attitudes of employees toward administrators and administrative change. An interview with these staff might begin with an open-ended, nondirective question, such as "What happened the last time someone tried to make changes in the clinics?," and then follow through on expressions of enthusiasm, indifference, or disillusionment that emerge from initial responses. Jokes and "horror stories" shared in the interview or in more public settings should be taken seriously because they can convey a lot about the core values, traditions, and traumatic experiences of the staff who tell them. In general, critical incident interviews are invaluable for discovering past events and experiences that have proved influential to people in the present. In this scenario, they could help you anticipate sources of resistance to change among the staff who will encounter it.

You will also want to talk to patients to understand their views: their expectations for care, their needs for clinical and social support programs, and their satisfactions and frustrations with your institution, for example. You could obtain this information in individual interviews, but with the potential for a variety of opinions among a diverse clinic population, it may be more useful and efficient to seek it in the context of one or more focus groups. Participants interact with one another in these groups, and in the process generate useful data that are not always available in one-on-one interviews. For instance, dissent between group members about the desirability of educational programs could reveal important differences in their knowledge and needs, while consensus about the usefulness of evening clinic hours might validate one of your own untested ideas about enhancing clinic service availability.

You would organize these groups according to your objectives. To hear ideas about how you might improve clinical services from the patients who actively use them, you could recruit participants from the waiting area or from lists of individuals seen more than once in the past 6 months. To understand whether community outreach programs might attract new patients to the clinic, you could choose registered patients who reside within the hospital's ZIP code area. Or to discover sources of dissatisfaction, you might attempt to include patients who had a single initial visit to clinic physicians and did not return for follow-up. Because the optimal size for these groups is approximately four to eight people, you might organize several sessions with different individuals from these categories, or a series of sessions with a cross section of participants in each.

As with other qualitative techniques, facilitating a focus group requires a flexible approach in balancing minimal participation with active involvement to prompt group discussion in productive directions. You could initiate discussion with the question "How do you think this clinic could serve each of you better?" and intervene to stimulate participant interactions, to clarify important points or disagreements, or to ask questions that remain unanswered nearing the end of the session. Because group participants ideally control the content and pace of the conversation, it is particularly useful for facilitators of focus groups to record these sessions. An audiotape or videotape can be reviewed for meanings and interactions that were not evident in the course of the group discussion, and should be transcribed and coded for key themes or variables by a person familiar with common coding procedures. Information on these procedures is available in standard references.[11,12]

WHY USE THESE TECHNIQUES?

Qualitative observations and interviews can provide invaluable practical information: who in the medical records department might improve the record retrieval rate, for instance, or what kinds of outreach programs would attract new patients. But at a deeper level qualitative encounters are also necessary to understand the "structure" of a system: how interdependent individuals,

groups, and institutional components function (or fail to function) together. This is critical because in a hospital, as in any complex system, change or inertia in one dimension inevitably affects others.

Plans to offer evening clinic hours, for example, may require full consideration of clerical and nursing union standards, benefits requirements, security staffing, housestaff expectations, pharmacy availability, and other aspects of operations. Will compensatory time requirements for clerical staff who work overtime result in staff shortages during regular weekday working hours? Can hospital security staff guarantee safety after hours to an isolated and otherwise unpopulated clinic area? Will the pharmacy have sufficient personnel to fill outpatient prescriptions in addition to inpatient orders? And will the increased patient base and third-party payments generated by a general medicine evening clinic cover the total additional costs to these and other components of the system? These groups' members each have a potential stake in changes that at first glance may be obviously useful to patients and relevant only to personnel at a local level.

Qualitative research techniques are essential for uncovering the extent of these interdependencies and the values that members throughout the system place on them and on the status quo. They provide tools for the visitor or outsider to a complex social system to characterize its important components and to anticipate and coordinate the effects of change throughout it. Whereas commonly used quantitative research methods provide information about universal circumstances, properly applied qualitative techniques yield extensive structured knowledge about these kinds of circumstances, processes, sources of meanings, values, and interactions unique to one place and one system at a specific time. Because every existing institution is simultaneously a bureaucracy, business, social system, and web of vested interests, changes that make a significant impact on such institutions may only be fully understood, prospectively or retrospectively, by a combination of quantitative and qualitative approaches.

SUMMARY

Faced with new responsibilities and skeptical about the relevance of qualitative research techniques, you nevertheless try them and learn in the process that developing an ideal clinical operation will require effort and patience. With small discretionary funds and an equipment request for a VCR and monitor, you can easily improve the quality and appeal of educational material in the waiting room. But finding alternatives to an oversold parking structure to help diminish unmanageably late arrivals and patient frustration will be virtually impossible. You learn that although your department's plans to increase the profile (and profit) of the outpatient clinics holds potential rewards for all involved parties, little has been done to negotiate limited resources from overextended hospital services. This will be a large portion of your job, and possibly its greatest challenge.

Without qualitative techniques you most likely would have discovered this information when programs or changes you proposed met resistance and perhaps frustrated or angered others. But with them you gain the foresight to anticipate and avoid obstacles rather than run in to them. You do so in a way that includes contributors at all levels of the hospital, enlisting them prospectively in programs both you and they can see as collaborative. With the goodwill of a newcomer, you establish meaningful contacts in multiple hospital services and better understand their responsibilities, affiliations, ambitions, and limits. You thereby identify likely areas of administrative movement and friction throughout the system that you can account for in present and future plans.

Beyond this administrative scenario, qualitative approaches can be equally useful in managing clinical, educational, and other challenges that arise in outpatient settings (Table 2). Whether physicians are seeking to improve patient adherence, recruit trainees into generalist careers, or negotiate with superiors, taking time to discover what is important to patients, students, educators, section heads, and other leaders can put physicians in a position to elicit the best performance and contributions of each.

Physicians may already consider themselves well trained to observe and gather facts from other people, but qualitative research provides the principles and structure to do so in an empiric, trustworthy, and systematic manner. Admittedly, the procedural differences between qualitative research and everyday practice may not seem nearly as great as those between daily practice and quantitative research. Although this fact might be used to reinforce the impression that qualitative investigation lacks rigor, it requires much of the same effort, attention to procedures, resistance to bias, and attention to data integrity that characterize other methods. We have hoped to illustrate that the "proximity" between this form of research and practice can be used to practical advantage—to enhance our understanding of our patients and day-to-day settings, the meaningfulness of our interventions, and thereby our effectiveness in daily professional responsibilities.

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